



# UNITED STATES PATENT AND TRADEMARK OFFICE

*an*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,489	03/31/2004	Yasushi Aono	04209 /LH	1221

1933 7590 11/28/2006

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC  
220 Fifth Avenue  
16TH Floor  
NEW YORK, NY 10001-7708

EXAMINER

PRITCHETT, JOSHUA L

ART UNIT	PAPER NUMBER
----------	--------------

2872

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/816,489	AONO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Joshua L. Pritchett	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-21 and 23-46 is/are pending in the application.
- 4a) Of the above claim(s) 4-21 and 23-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,45 and 46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

This action is in response to Request for Continued Examination filed November 17, 2006 and Amendment filed August 17, 2006. Claims 1, 45 and 46 have been amended and claim 2 has been cancelled as requested by the applicant.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Axelrod ("Total Internal Reflection Fluorescence at Biological Surfaces").

Axelrod discloses a total internal reflection fluorescence microscope comprising at least one objective (objective) lens which takes light from a specimen (Fig. 5); an image pick-up device (PM or video) which picks up an image of the light taken into the objective lens (Fig. 5); an observation optical path via which light taken into the objective lens is condensed onto the image pickup device (Fig. 5); a condenser lens (P) which is disposed in a position facing the objective lens via the specimen (cells) and which has a numerical aperture that makes possible total internal reflection illumination and which guides a transmitted illuminative light, which is emitted by a light source (from 'I' Fig. 5) into the specimen (Fig. 5 pages 100-101); a base

Art Unit: 2872

including an upper portion that holds the condenser lens (Fig. 5); a laser oscillation unit which outputs the laser beam (I); an optical fiber which transmits the laser beam output from the laser oscillation unit (page 108); a reflection mirror (M) provided at a lower portion of the base to introduce the laser beam output from the optical fiber into a vicinity of the outermost portion of the condenser lens (P); a condensing lens (Lens) which converts the laser beam diverged and emitted from an emission end of the fiber into a convergent light to condense the light in the vicinity of a front focal position of the condenser lens (Fig. 5). Axelrod lacks reference to the mirror moving. Axelrod does teach that the condensing lens (Lens) is capable of movement perpendicular to the laser beam path which would have the same impact on the light introduced to the sample as moving the mirror in a direction substantially perpendicular to a light path of transmitted illuminative light. The effect in both cases would be to change the position of the laser beam on the lens (P) of Axelrod to change the angle of internal reflection thus changing the illumination that is incident to the specimen. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the mirror of Axelrod movable in a direction substantially perpendicular to a light path of transmitted illuminative light as is suggested by Axelrod's movement of the condensing lens for the purpose of providing different excitations of the specimen to allow a more comprehensive analysis of the specimen.

### ***Response to Arguments***

Applicant's arguments filed August 17, 2006 have been fully considered but they are not persuasive.

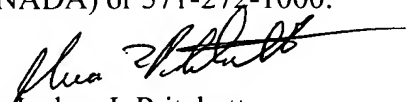
Applicant argues the angle of deflection is constant in Axelrod. The claim language does not require a change of the angle of deflection therefore this argument is moot.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Joshua L Pritchett  
Examiner  
Art Unit 2872